

Newco[®]

Forged Steel Bolted & Welded Bonnet Globe Valves

Manufactured by Newmans™

Sizes: 1/2" thru 2" • Pressure Class: 150 thru 4500



Typical Newco Forged Steel Bolted & Welded Bonnet Globe Valve Expanded View

1. Handwheel Nut: The handwheel nut secures the handwheel to the bonnet assembly.

2. Handwheel Washer: The washer helps to prevent loosening.

3. Handwheel: The handwheel cycles the valve.

4. & 14. Gland Bolts & Nuts: The gland bolt and nut allows for easy adjustments for packing compression.

5. Gland Flange: Applies pressure to the gland for accurate packing compression.

6. Gland: Compresses the packing to create a stem seal above the back seat, between the bonnet and stem.

7. Packing: The packing creates a seal above the back seat, between the bonnet and stem.

8. Bonnet Bolts: The bonnet bolts secure the bonnet to the body.

9. Bonnet: Newco bonnet assemblies are built to the same standards as the bodies.

10. Bonnet Gasket: The bonnet gasket creates a leakproof seal between the bonnet and body.

11. Body: Newco forged steel bodies provide low resistance flow and optimum strength and performance

12. Seat Ring: To ensure a stable shutoff, the seat ring is aligned into the valve, then precision ground for optimal seating.

13. Stem Nut: The stem nut provides a precision guide for proper stem alignment.

15. Stuffing Box: The stuffing box contains the packing.

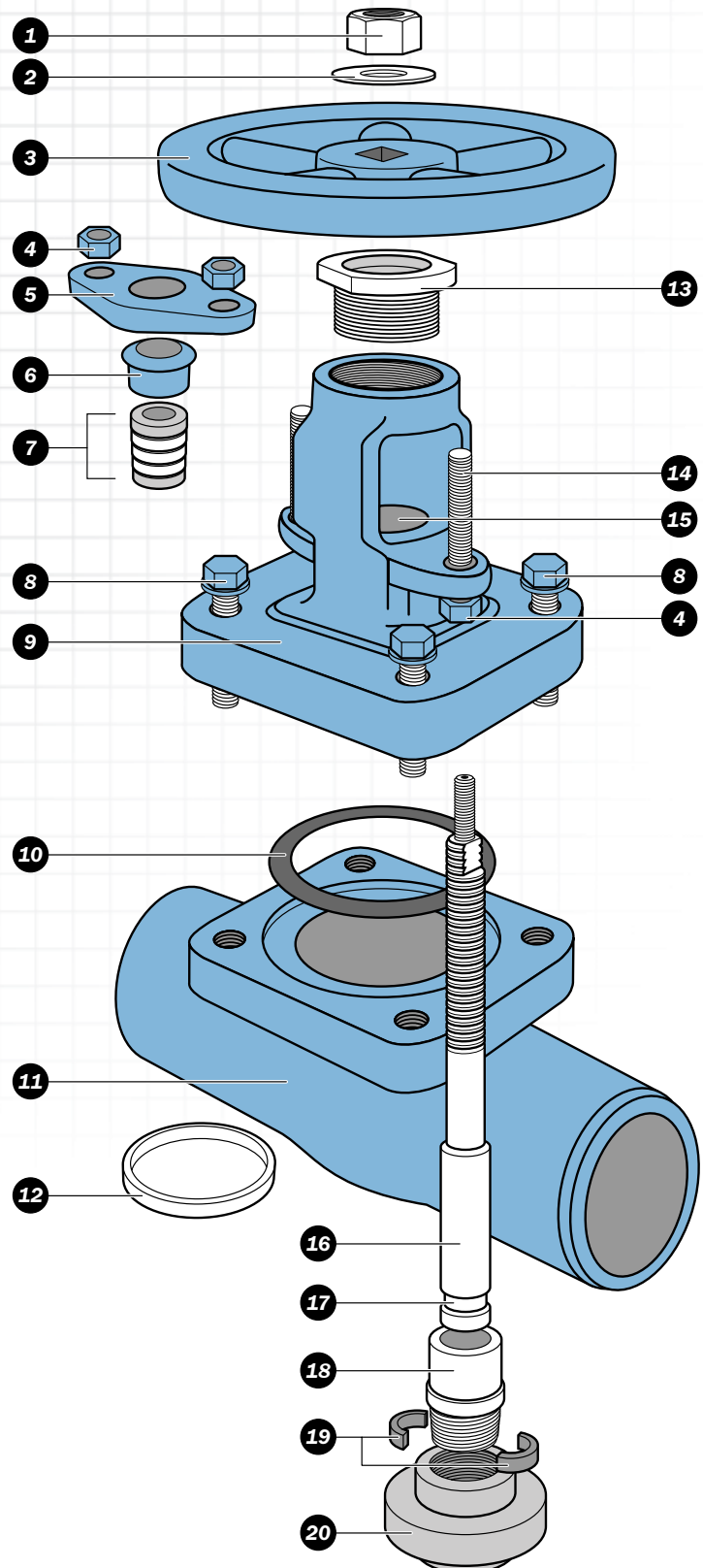
16. Stem: The stem inserts vertically into the disc.

17. Lock Groove: The lock groove receives the split lock ring which allows the disc nut to lift the disc during cycling.

18. Disc Nut: The disc nut, in conjunction with the split lock ring, secures the disc to the stem.

19. Split Ring: The split ring allows the disc nut to lift the disc during cycling.

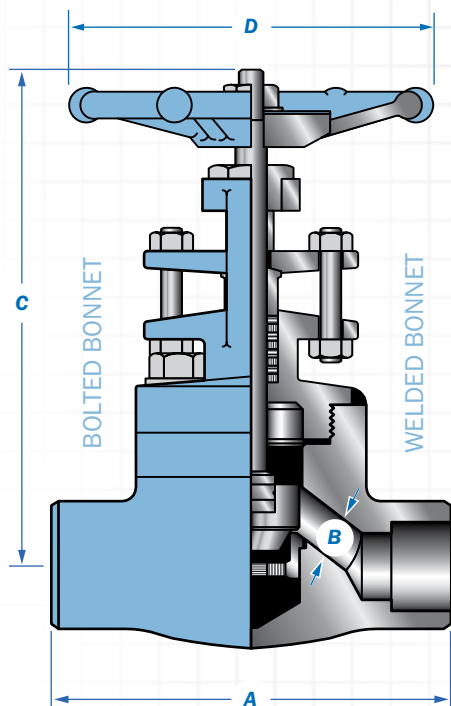
20. Disc: Newmans plug type disc is machined to the tightest tolerances to ensure trouble free shutoff and cycling.



Forged Steel Bolted & Welded Bonnet Globes
Threaded, Socket Weld & Buttweld Ends
Conventional Port
Class 800 thru 2500
Sizes: 1/2" thru 2" (1/4" & 3/8" available upon request)

Design and Manufacturing Standards

Valve Design: API 602
Pipe Threads, General Purpose, Inch: ASME B1.20.1
Socket Welding: ASME B16.11
Tested in Accordance with: API 598
Recommended Spare Parts*



Class 800 thru 1500
Bolted & Welded Bonnet Globes

Size in.	Class 800 WB										Class 800 BB									
	A	B	C	D	Wt.	A	B	C	D	Wt.	A	B	C	D	Wt.	A	B	C	D	Wt.
1/2	3.2	3.1	0.35	6.3	5.2	3.2	3.3	4	2.9	3.2	3.1	0.35	6.3	5.2	3.2	3.3	4	2.9	3.2	3.1
15	80	78.7	9	160	132.1	80	83.8	1.8	1.3	80	78.7	9	160	132.1	80	83.8	1.8	1.3	80	78.7
3/4	3.5	3.6	0.49	6.7	5.4	3.2	3.3	4.4	3.7	3.5	3.6	0.49	6.7	5.4	3.2	3.3	4.4	3.7	3.5	3.6
20	90	91.4	12.5	170	137.2	80	83.8	2	1.7	90	91.4	12.5	170	137.2	80	83.8	2	1.7	90	91.4
1	4.3	4.4	0.68	7.9	7	3.9	4.7	7.3	6.4	4.3	4.4	0.68	7.9	7	3.9	4.7	7.3	6.4	4.3	4.4
25	110	111.8	17.5	200	177.8	100	119.4	3.3	2.9	110	111.8	17.5	200	177.8	100	119.4	3.3	2.9	110	111.8
1-1/4	5	4.7	0.88	9.3	8.3	4.7	5.9	11.9	15.9	5	4.7	0.88	9.3	8.3	4.7	5.9	11.9	15.9	5	4.7
32	127	119.4	22.5	235	210.8	120	149.9	5.4	7.2	127	119.4	22.5	235	210.8	120	149.9	5.4	7.2	127	119.4
1-1/2	6.1	6	1.14	9.3	8.4	5.5	5.9	17.4	14.9	6.1	6	1.14	9.3	8.4	5.5	5.9	17.4	14.9	6.1	6
40	155	152.4	29	270	213.4	140	149.9	7.9	6.8	155	152.4	29	270	213.4	140	149.9	7.9	6.8	155	152.4
2	6.7	6.8	1.37	11.4	10.3	6.7	6.7	23.8	23.4	6.7	6.8	1.37	11.4	10.3	6.7	6.7	23.8	23.4	6.7	6.8
50	170	172.7	35	290	261.6	170	170.2	10.8	10.6	170	172.7	35	290	261.6	170	170.2	10.8	10.6	170	172.7
Size in.	Class 1500 WB										Class 1500 BB									
	A	B	C	D	Wt.	A	B	C	D	Wt.	A	B	C	D	Wt.	A	B	C	D	Wt.
1/2	3.5	4.4	0.35	0.39	6.5	8.1	3.2	4.9	4.2	4.4	3.5	4.4	0.35	0.39	6.5	8.1	3.2	4.9	4.2	4.4
15	90	111.8	9	9.9	165	205.7	80	124.5	1.9	2	90	111.8	9	9.9	165	205.7	80	124.5	2	2
3/4	4.3	4.4	0.43	0.51	7.7	8.1	4.7	4.9	7	8.4	4.3	4.4	0.43	0.51	7.7	8.1	4.7	4.9	7.3	8.4
20	110	111.8	11	12.95	195	205.7	120	124.5	3.2	3.8	110	111.8	11	12.95	195	205.7	120	124.5	3.3	3.8
1	4.7	5.1	0.57	0.66	9.3	9.4	5.5	6.2	12.1	9.3	4.7	5.1	0.57	0.66	9.1	9.4	5.5	6.2	12.1	9.3
25	120	129.5	14.5	16.76	235	238.8	140	157.5	5.5	4.2	120	129.5	14.5	16.76	230	238.8	140	157.5	5.5	4.2
1-1/4	5.1	5.9	0.75	0.9	10.4	10.2	5.5	6.2	17.6	17.6	5.1	5.9	0.75	0.9	10.2	10.2	5.5	6.2	19.8	17.6
32	130	149.9	19	22.86	265	259.1	140	157.5	8	8	130	149.9	19	22.86	260	259.1	140	157.5	9	8
1-1/2	6.7	6.8	1.06	1.18	11	11.4	6.7	6.2	24.2	29.1	6.7	6.8	1.06	1.18	11.2	11.4	6.7	6.2	26.4	29.1
40	170	172.7	27	29.97	280	289.6	170	157.5	11	13.2	170	172.7	27	29.97	285	289.6	170	157.5	12	13.2
2	8.3	8.7	1.22	1.49	13.2	13.3	6.7	7.1	39.6	37	8.3	8.7	1.22	1.49	13	13.3	6.7	7.1	39.6	37
50	210	220.9	31	37.85	335	337.8	170	180.3	18	16.8	210	220.9	31	37.85	330	337.8	170	180.3	18	16.8
Size in.	Class 2500 WB										Class 2500 BB									
	A	B	C	D	Wt.	A	B	C	D	Wt.	A	B	C	D	Wt.	A	B	C	D	Wt.
1/2	4.3	0.43	7.7	4.7	8.6	4.3	0.43	10.6	4.7	11	4.3	0.43	10.6	4.7	11	4.3	0.43	10.6	4.7	11
15	110	11	195	120	3.9	110	11	270	120	5	110	11	270	120	5	110	11	270	120	5
3/4	4.7	0.55	8.9	5.5	14.1	4.7	0.55	10.8	5.5	17.6	4.7	0.55	10.8	5.5	17.6	4.7	0.55	10.8	5.5	17.6
20	120	14	225	140	6.4	120	14	275	140	8	120	14	275	140	8	120	14	275	140	8
1	5.1	0.75	10	5.5	19.9	5.1	0.75	11.4	5.5	23.5	5.1	0.75	11.4	5.5	23.5	5.1	0.75	11.4	5.5	23.5
25	130	19	255	140	9	130	19	290	140	10.7	130	19	290	140	10.7	130	19	290	140	10.7
1-1/4	8.3	0.94	12.8	6.7	44	8.3	0.94	15.4	6.7	52.8	8.3	0.94	15.4	6.7	52.8	8.3	0.94	15.4	6.7	52.8
32	210	24	325	170	20	210	24	390	170	24	210	24	390	170	24	210	24	390	170	24
1-1/2	8.3	1.1	13	6.7	48.4	8.3	1.1	16.3	10.2	70.4	8.3	1.1	16.3	10.2	70.4	8.3	1.1	16.3	10.2	70.4
40	210	28	330	170	22	210	28	415	260	32	210	28	415	260	32	210	28	415	260	32
2	9.5	1.42	14.6	10.2	61.6	9.5	1.42	16.7	10.2	81.4	9.5	1.42	16.7	10.2	81.4	9.5	1.42	16.7	10.2	81.4
50	240	36	370	260	28	240	36	425	260	37	240	36	425	260	37	240	36	425	260	37

Typical Bill of Materials (See page 12 for available materials.)

Component	Material	ASTM Spec	Component	Material	ASTM Spec
Body	Carbon Steel	A105N	Handwheel Nut	Carbon Steel	Commercial
Bonnet	Carbon Steel	A105N	Nameplate	Aluminum	Commercial
* Packing	Graphite W/Braided Carbon Fiber End Rings		Handwheel	Carbon Steel	Commercial
* Gasket	Stainless Steel 316 Graphite		Yoke Sleeve	Stainless Steel	AISI 416
Stem	Stainless Steel	A479-410	Gland Nuts	Carbon Steel	A194 2H
Disc	Stainless Steel	13 Chrome	Gland Flange	Carbon Steel	A105N
Seat Rings	Stainless Steel	A479-410	Gland Studs	Stainless Steel	AISI 410
Bonnet Bolt	Alloy Steel	A193 B7	Packing Gland	Stainless Steel	AISI 416
Washer	Carbon Steel	Commercial			

Note: Dimensions: Inches/Millimeters - Weights: Pounds/Kilograms. Larger sizes available on request. Dimensions are subject to change without notice.

Forged Steel Flanged End Globes
Bolted & Welded Bonnet
Conventional Port
Class 150 thru 1500
Sizes: 1/2" thru 2" (1/4" & 3/8" available upon request)

Design and Manufacturing Standards

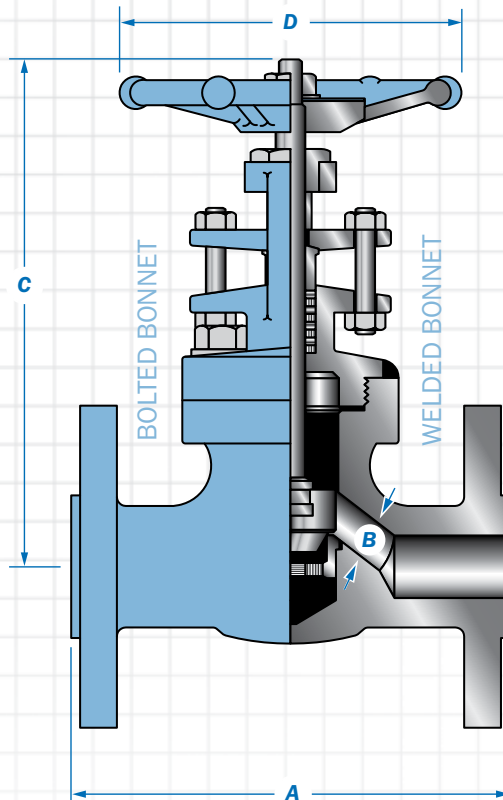
Valve Design: API 602

Flange Dimensions: ASME B16.5

Face-to-Face Dimensions: ASME B16.10

Tested in Accordance with: API 598

Recommended Spare Parts*



Class 150 thru 1500
Bolted & Welded Bonnet Flanged Globes

Size in. mm	Class 150 BB & WB									
	A		B		C		D		Wt.	
	41	45	41	45	41	45	41	45	41	45
1/2	4.25	0.35	0.39	7.3	6.8	3.1	7	9.9		
15	108	9	9.9	185	173	80	3.1	4.5		
3/4	4.63	0.47	0.39	7.6	7.0	3.1	8	15.2		
20	118	12.5	9.9	192	178	80	4	6.9		
1	5.00	0.67	0.69	8.7	8.3	4.0	17	21.6		
25	127	17.5	17.5	220	211	100	5.7	9.8		
1-1/2	6.50	1.10	1.18	10.4	9.2	5.5	25	42.9		
40	165	29	30	265	234	140	10.6	19.5		
2	8.00	1.34	1.46	12.2	10.4	6.7	35	61.6		
50	203	35	37.1	310	264	170	15.4	28		

Size in. mm	Class 300 BB & WB									
	A		B		C		D		Wt.	
	41	45	41	45	41	45	41	45	41	45
1/2	6.00	0.35	0.39	6.3	6.26	3.1	8	10.6		
15	152.5	9	9.9	160	159	80	3.5	4.8		
3/4	7.00	0.47	0.39	6.6	6.26	3.1	11	16.9		
20	178	12.5	9.9	168	159	80	4.8	7.7		
1	8.00	0.67	0.69	7.9	7.6	4.0	15	24.2		
25	203	17.5	17.5	200	193	100	7.2	11		
1-1/2	9.00	1.10	1.18	10.6	9.2	5.5	30	46.6		
40	229	29	30	268	234	140	14.5	21.2		
2	10.5	1.34	1.46	11.4	10.4	6.7	40	71.7		
50	267	35	37.1	290	264	170	18	32.6		

Size in. mm	Class 600 BB & WB									
	A		B		C		D		Wt.	
	41	45	41	45	41	45	41	45	41	45
1/2	6.50	0.35	0.39	6.3	6.26	3.1	8.2	12.3		
15	165	9	9.9	160	159	80	3.7	5.6		
3/4	7.50	0.47	0.39	6.6	6.26	3.1	11.7	17.2		
20	190.5	12.5	9.9	168	159	80	5.3	7.8		
1	8.50	0.67	0.69	7.9	7.6	4.0	18.1	27.5		
25	216	17.5	17.5	200	193	100	8.2	12.5		
1-1/2	9.51	1.10	1.18	10.6	8.7	5.5	33.1	51.7		
40	241.5	29	30	268	221	140	15	23.5		
2	11.5	1.34	1.46	11.4	10.4	6.7	47.4	85.4		
50	292	35	37.1	290	264	170	21.5	38.8		

Size in. mm	Class 1500 BB & WB									
	A		B		C		D		Wt.	
	41	45	41	45	41	45	41	45	41	45
1/2	8.5	.43	0.5	8.86	8.1	4.72	3.93	22.0	17.6	
15	216	11	13	225	207	120	100	10.0	8.0	
3/4	9.0	.57	0.7	10.63	9.4	5.51	4.92	33.0	29.0	
20	229	14.5	18	270	240	140	125	15.0	13.2	
1	10.0	.75	0.9	11.22	10.2	5.51	6.29	37.4	38.3	
25	254	19	24	285	258	140	160	17.0	17.4	
1-1/4	11.0	-	1.1	-	11.4	-	6.29	-	42.0	
32	279	-	29	-	290	-	160	-	19.0	
1-1/2	12.0	1.22	1.4	15.75	13.3	6.69	7.08	79.2	54.0	
40	305	31	36.5	400	337	170	180	36.0	24.5	
2	14.5	1.48	1.8	16.54	14.0	10.24	9.45	121.0	68.2	
50	368	37.5	46.5	420	354	260	240	55.0	31.0	

Typical Bill of Materials (See page 12 for available materials.)

Component	Material	ASTM Spec
Body	Carbon Steel	A105N
Bonnet	Carbon Steel	A105N
* Packing	Graphite W/Braided Carbon Fiber End Rings	
* Gasket	Stainless Steel 316 Graphite	
Stem	Stainless Steel	A479-410
Disc	Stainless Steel	13 Chrome
Seat Rings	Stainless Steel	A479-410
Bonnet Bolts	Alloy Steel	A193 B7
Washer	Carbon Steel	Commercial
Handwheel Nut	Carbon Steel	Commercial
Nameplate	Aluminum	Commercial
Handwheel	Carbon Steel	Commercial
Yoke Sleeve	Stainless Steel	AISI 416
Gland Nuts	Carbon Steel	A194 2H
Gland Flange	Carbon Steel	A105N
Gland Studs	Stainless Steel	AISI 410
Packing Gland	Stainless Steel	AISI 416

Note: Dimensions: Inches/Millimeters - Weights: Pounds/Kilograms. Larger sizes available on request. Dimensions are subject to change without notice.

Rev: 072109

**Forged Steel Y-Pattern
Bolted & Welded Bonnet Globe
Conventional Port
Class 800 thru 2680
Sizes: 1/2" thru 2" (1/4" & 3/8" available upon request)**

Design and Manufacturing Standards

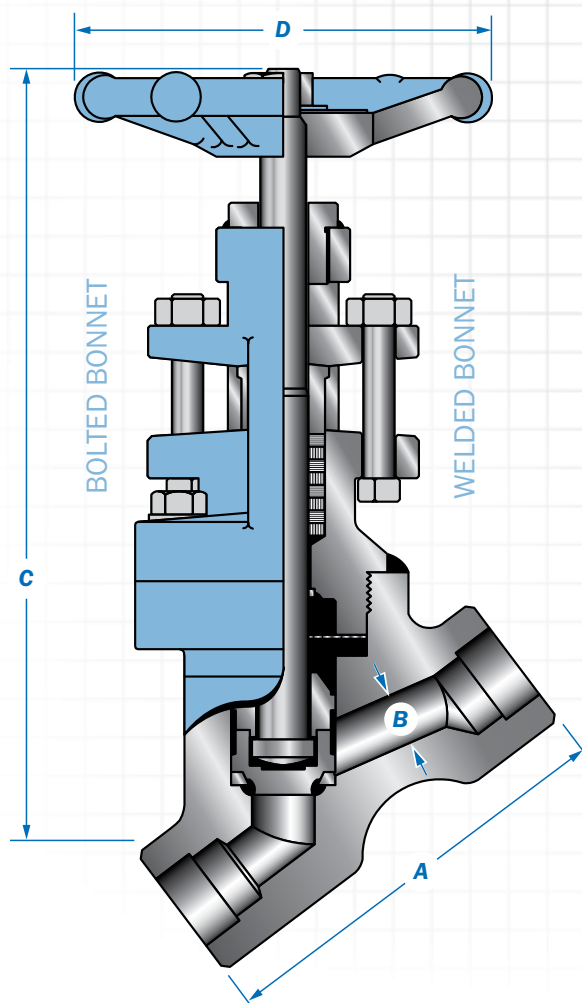
Valve Design: ASME B16.34

Pipe Threads, General Purpose, Inch: ASME B1.20.1

Socket Welding: ASME B16.11

Tested in Accordance with: API 598

Recommended Spare Parts*



**Class 800
Bolted & Welded Bonnet Globe**

Size	A	B	C	D	Wt.
1/2	3.6	0.39	7.5	3.7	4.4
15	92	10	190	95	2
3/4	3.6	0.51	7.5	3.7	4.4
20	92	13	190	95	2
1	4.4	0.69	9.3	4.3	9
25	111	17.5	235	110	4.1
1-1/4	6	0.94	11.2	5.5	19.8
32	152	24	286	140	9
1-1/2	6	1.22	11.2	5.5	19.8
40	152	31	286	140	9
2	6.8	1.46	12.8	6.7	30.4
50	172	37	325	200	13.8

**Class 1500 & 1690
Welded Bonnet Globe**

Size	A	B	C	D	Wt.
1/2	3.9	0.51	7.3	3.9	6.6
15	100	13	185	100	3
3/4	4.3	0.69	9.1	5.5	8.8
20	110	17.5	230	140	4
1	4.9	0.89	9.4	5.5	11
25	125	22.5	240	140	5
1-1/4	5.9	1.1	12	6.7	20.9
32	150	28	305	170	9.5
1-1/2	6.3	1.38	13.4	7.9	24.2
40	160	35	340	200	11
2	7.5	1.73	15.7	10.2	37.4
50	190	44	400	260	17

**Class 2500 & 2680
Welded Bonnet Globe**

Size	A	B	C	D	Wt.
1/2	3.9	0.47	9.1	4.7	8.8
15	100	12	230	120	4
3/4	4.9	0.59	9.4	5.5	11
20	125	15	240	140	5
1	6.3	0.79	12	6.7	20.9
25	160	20	305	170	9.5
1-1/4	6.3	0.98	12	6.7	23.1
32	160	25	305	170	10.5
1-1/2	7.5	1.22	13.6	7.9	37.4
40	190	31	345	200	17
2	8.3	1.49	15.7	10.2	50.6
50	210	38	400	260	23

Typical Bill of Materials (See page 12 for available materials.)

Component	Material	ASTM Spec	Component	Material	ASTM Spec
Body	Carbon Steel	A105N	Handwheel Nut	Carbon Steel	Commercial
Bonnet	Carbon Steel	A105N	Nameplate	Aluminum	Commercial
* Packing	Graphite W/Braided Carbon Fiber End Rings		Handwheel	Carbon Steel	Commercial
* Gasket	Stainless Steel 316 Graphite		Yoke Sleeve	Stainless Steel	AISI 416
Stem	Stainless Steel	A479-410	Gland Nuts	Carbon Steel	A194 2H
Disc	Stainless Steel	13 Chrome	Gland Flange	Carbon Steel	A105N
Seat Rings	Stainless Steel	A479-410	Gland Studs	Stainless Steel	AISI 410
Bonnet Bolts	Alloy Steel	A193 B7	Packing Gland	Stainless Steel	AISI 416
Washer	Carbon Steel	Commercial			

Note: Dimensions: Inches/Millimeters - Weights: Pounds/Kilograms. Larger sizes available on request. Dimensions are subject to change without notice.

Rev: 072109

**Forged Steel High Pressure
Welded Bonnet Globe
Conventional Port
Class 4500
Sizes: 1/2" thru 2"**

Design and Manufacturing Standards

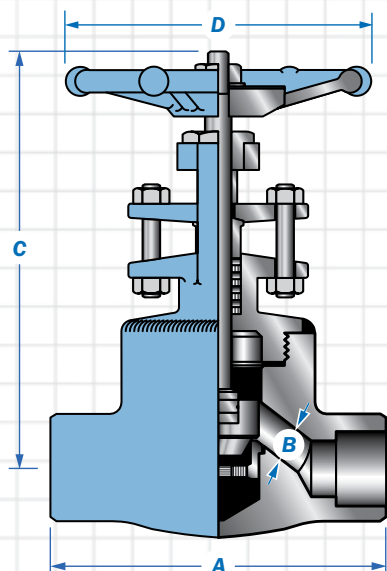
Valve Design: ASME B16.34

Pipe Threads, General Purpose, Inch: ASME B1.20.1

Socket Welding: ASME B16.11

Tested in Accordance with: API 598

Recommended Spare Parts*

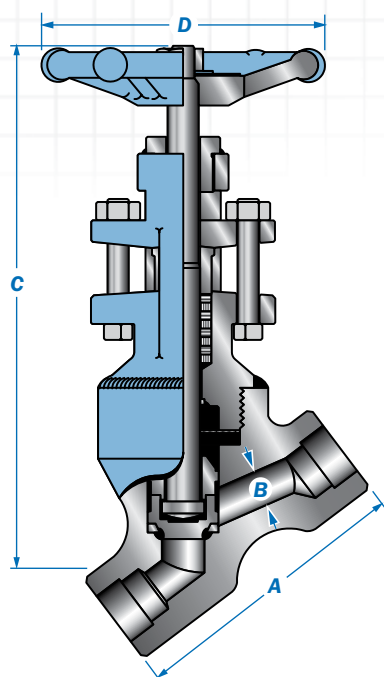


**Class 4500
Welded Bonnet Globe**

Size	A	B	C	D	Wt.
1/2	4.7	0.31	8.9	4.7	17.6
15	120	8	228	120	8
3/4	6.1	0.47	10.8	5.5	4
20	155	12	275	140	11
1	6.1	0.59	11	5.5	41.8
25	155	15	280	140	19
1-1/4	8.3	0.79	16.1	10.2	50.6
32	210	20	410	260	23
1-1/2	8.3	0.98	16.1	10.2	50.6
40	210	25	410	260	23
2	9.4	1.1	16.5	10.2	50.6
50	240	28	420	260	23

Typical Bill of Materials (See page 12 for available materials.)

Component	Material	ASTM Spec	Component	Material	ASTM Spec
Body	Carbon Steel	A105N	Handwheel Nut	Carbon Steel	Commercial
Bonnet	Carbon Steel	A105N	Nameplate	Aluminum	Commercial
* Packing	Graphite W/Braided Carbon Fiber End Rings		Handwheel	Carbon Steel	Commercial
* Gasket	Stainless Steel 316 Graphite		Yoke Sleeve	Stainless Steel	AISI 416
Stem	Stainless Steel	A479-410	Gland Nuts	Carbon Steel	A194 2H
Disc	Stainless Steel	13 Chrome	Gland Flange	Carbon Steel	A105N
Seat Rings	Stainless Steel	A479-410	Gland Studs	Stainless Steel	AISI 410
Bonnet Bolts	Alloy Steel	A193 B7	Packing Gland	Stainless Steel	AISI 416
Washer	Carbon Steel	Commercial			



**Class 4500
Welded Bonnet Y-Pattern Globe**

Size	A	B	C	D	Wt.
1/2	4.9	0.31	9.4	5.5	12.1
15	125	8	240	140	5.5
3/4	6.3	0.43	11.2	6.7	22
20	160	11	285	170	10
1	7.5	0.59	12.6	7.9	37.4
25	190	15	320	200	17
1-1/4	7.5	0.71	12.6	7.9	37.4
32	190	18	320	200	17
1-1/2	8.3	0.79	12.6	10.2	41.8
40	210	20	360	260	19
2	11	0.98	17.7	14.6	52.8
50	280	25	450	370	24

Note: Dimensions: Inches/Millimeters - Weights: Pounds/Kilograms. Larger sizes available on request. Dimensions are subject to change without notice.

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